GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: REVIEW OF THE PUERTO RICO ELECTRIC POWER AUTHORITY'S 10-YEAR INFRASTRUCTURE PLAN – DECEMBER 2020	**CASE NO.: NEPR-MI-2021-0002** **SUBJECT:** Resolution and Order for the Motion to Request Approval for the Partial Compliance with the January 4 Order.

RESOLUTION AND ORDER

I. Introduction

On March 26, 2021, the Energy Bureau issued a Resolution and Order ("March 26 Resolution") through which it ordered the Puerto Rico Electric Power Authority ("PREPA") to submit each specific capital investment project for approval, to avoid potential noncompliance with the Approved Integrated Resource Plan ("IRP") and Modified Action Plan[1].[2] The Energy Bureau required PREPA to submit the specific projects to the Energy Bureau for approval at least thirty (30) calendar days before their submittal to the Puerto Rico Central Office for Recovery, Reconstruction and Resiliency ("COR3") and the Federal Emergency Management Agency ("FEMA").[3]

On November 15, 2021, PREPA filed before the Energy Bureau a document titled *Motion to Submit Fourth Group of Generation Projects* ("November 15 Motion"). Through the November 15 Motion, PREPA submitted one hundred-four (104) Work descriptions in Attachment A containing a general description of works of conservation, repairs, and retrofitting of its generation units and their auxiliary equipment, including, without limitation, boilers, turbines, rotors, generators, motors, pumps, breakers, and control systems for their generation power plants ("Proposed Generation Projects"). The works are to be performed in the following Plants: San Juan Power Plant, Aguirre Power Plant and Combined Cycle, Costa Sur Power Plant, Palo Seco Steam Plant, Hydrogas Turbine Peakers, Cambalache, Mayaguez Gas Turbines, and a list of jobs to be achieved in all the power plants. PREPA has prepared a comprehensive list of repairs works projects of its generation assets and for which PREPA will seek reimbursement under several FEMA programs (*i.e.* Section 428 Public Assistance).

On January 4, 2022, the Energy Bureau issued a Resolution and Order ("January 4 Order"), through which it conditionally approved certain Proposed Generation Projects as described in Attachments A to H of the referenced January 4 Order ("Conditionally Approved Projects"), pending the submittal by PREPA of the Statement of Work ("SOW") of each project. The Energy Bureau also determined to defer for further evaluation several of the Proposed Generation Projects. The deferred projects are listed in Attachment I of the January 4 Order ("Deferred Projects"). Additionally, the January 4 Order provides directives regarding the Conditionally Approved Projects and the Deferred Projects including, among others, a requirement for PREPA to, on or before January 14, 2022, submit for the Energy Bureau's evaluation, SOWs for each Conditionally Approved Projects and Deferred Projects. The January 4 Order also directed PREPA to respond to six (6) requests for information ("RFI") on or before January 19, 2022.

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[1] Resolution and Order, In re: Review of the Puerto Rico Electric Power Authority's 10- Year Infrastructure Plan, Case No. NEPR-MI-2021-0002, March 26, 2021 ("March 26 Resolution").

[2] *Final Resolution and Order on the Puerto Rico Electric Power Authority's Integrated Resource Plan,* In re: Review of the Integrated Resource Plan of the Puerto Rico Electric Power Authority, Case No. CEPR-AP-2018-0001, August 24, 2020 ("IRP Order").

[3] March 26 Resolution, pp. 14-15. The Energy Bureau determined that this directive equally applies to LUMA Energy, LLC and LUMA Energy ServCo, LLC (collectively, "LUMA"). *See,* In Re: Review of the Puerto Rico Electric Power Authority's 10-Year Infrastructure Plan – December 2020, Case. No. NEPR-MI-2021-0002, Resolution and Order, June 8, 2021.

To complete the evaluation on the Proposed Generation Projects, in the January 8 Order, the Energy Bureau requested the following:

1. The current status of each unit listed in the Proposed Generation Projects;
2. If and how the expenditure will help bring the unit back to availability for operation;
3. When the unit would be available for operation if the expenditure was made;
4. The expected duration of availability status of the unit after the expenditure is made, and any other required explanation;
5. Provide an updated snapshot of the current status of repairs and expected availability over the next three years for the units located at San Juan, Palo Seco, Costa Sur and Aguirre; and
6. Provide either the "Draft released to PREPA" of the "10-Year Thermal Generation Retirement, Addition and Conversion Plan" as listed on page 7 of the December 2021 Status Report scheduled for finishing by March 2022 or provide a synopsis of PREPA's current understanding of how planned retirements of the fossil fleet are considered when requesting approval for maintenance and capital investment funding through the instant procedure.

On January 13, 2022, PREPA filed before the Energy Bureau a document titled *Partial Compliance with the January 4 Order and Request for Extension of Time* ("January 13 Motion"). Through the January 13 Motion, among other matters, PREPA submitted twenty-five (25) initial Scope of Works ("SOWs") for certain Proposed Generation Projects submitted for the review and approval of the Energy Bureau. Out of the twenty-five (25) SOWs, twenty-four (24) were conditionally approved while one (1) was classified as Deferred Project as stated in the January 4 Order. Attachment A of the January 13 Motion describes the Proposed Scope of Work for these twenty-five (25) of certain Proposed Generation Projects.

II. Evaluation of PREPA's January 13 Motion

As part of the January 13 Motion, PREPA included twenty-five (25) SOWs for the generation plants in San Juan Power Plant, Aguirre Power Plant and Combined Cycle, Costa Sur Power Plant, Palo Seco Steam Plant, and Mayaguez Gas Turbines.

Attachment A of the January 13 Motion contains SOWs for all twenty-five (25) works to be performed in the power plants. Out of the twenty-five (25) SOWs, twenty-four (24) were conditionally approved while one (1) was classified as Deferred Project (SOW No. 4069 of Attachment B for the Palo Seco Steam Plant) as stated in the January 4 Order. This Proposed Generation Project, SOW No. 4069, was classified as deferred since it is work intended for a unit included in the Retirement Plan[4]. The twenty-five (25) SOWS have the objective to (i) improve the generation asset's reliability, increasing their availability, and providing a continuous generation service, (ii) repair all the damages to equipment and areas within all the Plants; and (iii) restore the facilities to pre-disaster function and approved codes and standards. PREPA will seek reimbursement under several FEMA programs (*e.g.*, Section 404, Section 428 Public Assistance). All SOWs described the project and work to be performed, with the corresponding Cost Estimates, equipment specifications, bidding process for those works that requires the method, or corresponding documentation for those that are performed by unique or sole supplier. Attachment A also calculates the difference between the original estimate in the November 15 Motion, and the estimate in the January 13 Motion. The difference presents a Total of **$ (2,735,746.19) over what was presented originally in the November 15 Motion.**

Upon review of the SOWs, the Energy Bureau **DETERMINES** that the twenty-four (24) SOWs filed in the January 13 Motion ("24 SOWs"), which were classified as Conditionally Approved

[4] IRP Order, p. 284.

in the January 4 Order, are necessary to maintain and improve the reliability of the electrical systems in the related to the PREPA generation plants. The 24 SOWs presented include a description and justification for the corresponding units the type of project and the corresponding Codes and Standards that are impacted. Therefore, the Energy Bureau **APPROVES** the 24 SOWs projects in **Attachment A** of this Resolution and Order, as they are segregated by Plant, with the corresponding totals for each project as they were estimated in the January 13 Motion. The Energy Bureau notes this approval represents **$67,997,419.99**based on the proposed works presented by PREPA through the January 13 Motion.[5]

The Energy Bureau **DETERMINES to not approve** SOW 4069 for the Palo Seco Steam Plant as described in Attachment B of this Resolution and Order. SOW 4069 is classified as a deferred Proposed Generation Project in the January 4 Order. SOW 4069 is pending on providing more specific information regarding the Unit availability and actual condition **or provide a synopsis of PREPA's current understanding of how planned retirements of the fossil fleet are considered when requesting approval for maintenance and capital investment funding through the instant procedure. SOW 4069 shall be discussed in the proposed Technical Conference that shall be scheduled once PREPA files all pending SOWs and responds to all ROIs as stated in the January 4 Order.**

III. Conclusion

The Energy Bureau **APPROVES** the projects in **Attachment A** of this Resolution and Order, which shall be presented to FEMA and COR3 to finalize its approval process. These projects were approved based on the information provided by PREPA, should the scope of the project changes, PREPA **SHALL** immediately seek the Energy Bureau's approval of such changes. The information must comply with the requests listed in the January 4 Order, so information is available for the suitable evaluation of each project.

The Energy Bureau **ORDERS** PREPA to (i) submit to the Energy Bureau copy of the approval by COR3 and/or FEMA of the projects in Attachment A, which shall contain the costs obligated for each project, **within ten (10) days of receipt of such approval**; (ii) provide the Energy Bureau the actual contracted cost to construct each project approved in the Attachment A, **within ten (10) days from the execution of the contract**; and (iii) inform the Energy Bureau once the projects are completed.

The directive instated in the March 26 Resolution related to the submission of projects before the Energy Bureau at least thirty (30) calendar days before submitting such projects to FEMA and/or COR3 remains unaltered.

Be it notified and published.

Edison Avilés Deliz
Chairman

Ángel R. Rivera de la Cruz
Associate Commissioner

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

[5] The Energy Bureau has approved a total of $4,752.538 MM = $1,240.77 MM + $1,789.58 MM + $1,376.97 + $18.257 + $5.189+ $253.775 MM + $67.997 MM up to date based on the Class Cost Estimates submitted by PREPA and LUMA as part of this process.

NEGOCIADO DE ENERGÍA DE PUERTO RICO
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on February 10, 2021. I also certify that on February 10, 2021 a copy of this Resolution and Order was notified by electronic mail to the following: laura.rozas@us.dlapiper.com; margarita.mercado@us.dlapiper.com, kbolanos@diazvaz.law; mvazquez@diazvaz.law. I also certify that today, February 10, 2021, I have proceeded with the filing of the Resolution and Order issued by the Puerto Rico Energy Bureau.

For the record, I sign this in San Juan, Puerto Rico, today February 10, 2021.

Wanda I. Cordero Morales
Interim Clerk

Attachment A
Works Approved by the Energy Bureau for the Power Plants Permanent Repairs

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[6]	New Estimate[7]	Diff	Page at Att. A
1001	San Juan Power Plant	Units 5 Cooling Tower Replacement	Removal of existing cooling towers; design, build, installation, start up and commissioning of two new three cells cooling towers, model S3E-1222-07Q-3/SY, manufactured by Baltimore Aircoil Company (BAC), with its Lakos Tower Clean Filtration System.	$850,000.00	$1,887,145.00	($1,037,145.00)	p. 1
1003	San Juan Power Plant	Units 5 Condenser Repair and Coating Application	Rehabilitation and application of anti-corrosive coating for the water boxes and intake piping of the east side of the Unit 5 condenser.	$615,000.00	$1,031,250.00	($416,250.00)	p. 111
1004	San Juan Power Plant	Units 5 High Pressure Bleed Valve, Low Pressure Bleed Valve and Heat Injection Steam Valve	Purchase of equipment and parts for the replacement and installation of Vanessa 30,000 Triple Offset Automated Valves - Steam Injection Block Valves & Bleed Valves	$350,000.00	$374,237.00	($24,237.00)	p. 147
1005	San Juan Power Plant	Units 5 and 6 Black Start Emergency Generator Upgrade	Upgrade the controls system for the black start diesel generator system San Juan CTG 5 &6.	$350,000.00	$348,509.53	$1,490.47	p. 165

[6] Estimate presented in the November 15 Motion.

[7] Estimated included in the project's SOW.

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[6]	New Estimate[7]	Diff	Page at Att. A
1006	San Juan Power Plant	Units 5 Replacement of Outlet Valves and Elbow Condenser	Remove and replacement of the existing outlet valve and 42-inch diameter steel elbows, which are part of the outfall of the seawater use to cooldown the condensers of both Units 5 and 6.	$350,000.00	$673,667.10	($323,667.10)	p. 181
1020	San Juan Power Plant	Control System Upgrade Units 5 & 6	Perform an upgrade to the Units 5 & 6 Control System, including all the necessary cyber security programming	$3,203,050.00	$3,203,050.00	$0.00N/A	p. 300
1024	San Juan Power Plant	Installation of Modules D&E HRSG Unit 5	Replace critical pressure parts components of San Juan Generation Complex Unit 5 Heat Recovery Steam Generator (HRSG), specifically: Module D High Pressure Economizer 3 Tubes Bundles, Module D Intermediate Pressure Evaporators Tubes Bundles, Module E Intermediate Pressure Economizer Tubes Bundles, Module E High Pressure Economizer 1 Tubes Bundles, Module E High Pressure Economizer 2 Tubes Bundles.	$5,500,000.00	$9,750,263.00	($4,250,263.00)	p. 375
1025	San Juan Power Plant	Replacement of the Online Condenser Cleaner Unit 5	Supply, installation and commissioning of a online condenser cleaner system for Unit 5.	$3,000,000.00	$3,600,000.00	($600,000.00)	p. 489

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[8]	New Estimate[9]	Diff	Page at Att. A
2031	Aguirre Power Plant	Replacement of Load Center 1- 4 Condenser Circulating Water Pump	Removal and removal of existing breakers for the Load Center 1-4 of the Condenser Circulating Water Pumps for the cooling system of the condensers of Units 1 and 2.	$600,000.00	$630,000.00	$(30,000.00)	p. 905
2032	Aguirre Power Plant	Sea Water Intake Structural Repairs Work	Structural repairs of concrete beams, slabs and walls components of the sea water intake of the	$5,000,000.00	$5,274,222.00	($274,222.00)	p. 922
2033	Aguirre Power Plant	Rehabilitation Fuel Tank Farm Liners	Rehabilitation, repair and installation a of approximately 46,000 square feet of Flexible Membrane Liner System of the Aguirre Fuel Farm area.	$1,200,000.00	$1,291,000.00	($91,000.00)	p. 1164
2034	Aguirre Power Plant	Two New Condenser Discharge Water Pumps Motors	Procurement and delivery of two 400 Hp-395 RPM, 4,000 Volts-3 Phase, 60 Cycle Re-build Motors for the water discharge condenser pumps for the sea water canal discharge system.	$750,000.00	$750,000.00	$0.00	p. 1313
2035	Aguirre Power Plant	Two New BCWP Motors	Procurement and delivery of two Hp- RPM New Motors for the water discharge condenser pumps for the sea water canal discharge system.	$750,000.00	$640,150.00	$109,850.00	p. 1340

[8] Estimate presented in the November 15 Motion.

[9] Estimated included in the project's SOW.

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[10]	New Estimate[11]	Diff	Page at Att. A
2039	Aguirre Combined Cycle	Aguirre Combined Cycle Plant Permanent Repairs	Inspect turbine section major components (rotor, buckets, nozzles & shrouds). Replace Stage 1 Buckets (if necessary), Stage 1 Nozzle, transition Pieces and combustion liners with refurbished components. Repair all removed components for futures HGPI. Buy new MCC Transformer 4.16kV / 480V	$1,700,000.00	$716,267.36	$983,732.64	p. 1367
2040	Aguirre Combined Cycle	Hot Gas Path Inspection Work Units 1-1 and 1-2	Inspect turbine section major components (rotor, buckets, nozzles & shrouds). Replace Stage 1 Buckets (if necessary), Stage 1 Nozzle, transition Pieces and combustion liners with refurbished components. Repair all removed components for futures HGPI.	$2,000,000.00	$1,092,000.00	$908,000.00	p. 1408
2042	Aguirre Power Plant	Unit 1 - Major Inspection (Replacement Turbo- Generator)	Major Overhaul to Gas Turbine Num. 1 including the replacement of all the hot gas path components and the turbo-compressor blades. Also, repair the exhaust gas housing and perform the inspection of the turbo-rotor, the generator and repair the Gas Turbine enclosure and filter house.	$11,665,000.00	$11,164,417.00	$500,583.00	p. 2457

[10] Estimate presented in the November 15 Motion.

[11] Estimated included in the project's SOW.

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[12]	New Estimate[13]	Diff	Page at Att. A
2043	Aguirre Power Plant	Unit 2 Excitation System	Replacement of an obsolete Excitation System that has no replacement parts. The new system must increase the reliability and extend service life with replacement parts and service availability.	$1,516,675.00	$1,516,675.00	$0.00	p. 2560
2045	Aguirre Power Plant	Design Fire Pump for Aguirre Power Complex	Design for an above ground piping lines to replace the obsolete underground piping system. The existing system has undetectable leakages.	$800,000.00	$280,040.00	$519,960.00	p. 2570
3050	Costa Sur Power Plant	Procurement of Air-Preheaters Baskets, Unit 5	Procurement and delivery of hot and cold sections baskets and other components of the pre- heaters of Unit 5.	$1,000,000.00	$1,966,083.00	$(966,083.00)	p. 2614
3052	Costa Sur Power Plant	Procurement of Condenser Circulating Water Pump (CCWP) and Boiler Circulating Water Pump (BCWP) Spare Motors for Units 5 and 6	Procurement and delivery of motors to be storage as spare parts to avoid units forced outages and/or load limitations.	$620,000.00	$865,670.00	$(245,670.00)	p. 2635
3055	Costa Sur Power Plant	Replacement of Unit 5 Electric Load Center	Replacement of Auxiliary equipment load centers and breakers for turbines 5 and 6 due to obsolescence.	$1,000,000.00	$285,000.00	$715,000.00	p. 2648

[12] Estimate presented in the November 15 Motion.

[13] Estimated included in the project's SOW.

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[14]	New Estimate[15]	Diff	Page at Att. A
3063	Costa Sur Power Plant	BFWP Inner Barrel Bundle	Engineering and manufacture of an inner barrel bundle of the boiler feed water pump to be used in Unit 5 or 6.	$1,700,000.00	$1,625,954.00	$74,046.00	3063
4077	Palo Seco Steam Plant	Mega-Gens Environmental Commissioning	Perform all environmental and performance tests on three 27 Megawatts Combustion Units to comply with EPA's Air Standards	$970,000.00	$1,036,800.00	$(66,800.00)	4077
7092	Mayaguez	Unit 1A, 1B and 4A Rehabilitation	Repairs of Gas Generator Components of Units 1A and 1B and Repairs of PT (Upgrade 2+) on Power Turbine on Unit 4A.	$18,800,000.00	$17,995,020.00	$804,980.00	7092
			TOTAL	**$64,289,725.00**	**$67,997,419.99**	**($3,707,694.99)**	

[14] Estimate presented in the November 15 Motion.

[15] Estimated included in the project's SOW.

Attachment B
Works Not Approved by the Energy Bureau for the Power Plants Permanent Repairs

SOW No.	Facility	Project Name	Proposed Scope of Work	Original Estimate[16]	New Estimate[17]	Diff	Page at Att. A
4069	Palo Seco Steam Plant	PS 3 Procurement and Delivery of Water Wall Boiler Tubes and Economizer Unit PS3	Manufacture, testing and delivery of the following components of the Unit 3 boiler; the economizer, and water wall boiler tubes.	$5,000,000.00	$4,028,051.20	$971,948.80	p. 2764
			TOTAL	**$5,000,000.00**	**$4,028,051.20**	**$971,948.80**	

[16] Estimate presented in the November 15 Motion.

[17] Estimated included in the project's SOW.